L 23704-66   EWT(1)   SCTB   DD

ACC NR: AT6003856   SOURCE CODE: UR/2865/65/004/000/0217/0226.

AUTHOR: Kostikova, V. Ya.; Bayevskiy, R. M.; Kalinovskiy, A. P.;   13
Soshin, B. A.
                                                                    B+1

ORG: none

TITLE: .Possible application of electronic logical circuits for automatic medical
control

SOURCE: AN SSSR. Otdeleniye biologicheskikh nauk. Problemy
kosmicheskoy biologii, v. 4, 1965, 217-226

TOPIC TAGS: bioastronautics, bioinstrumentation, biotelemetry,
automatic control system, logic circuit, electronic circuit

ABSTRACT: Space flights of longer duration and covering greater
distances will sharply reduce telemetric transmission of medical and
biological data. This leads to the problem of developing on board
automatic medical control devices for monitoring data on the astronaut's
condition. For space flights along established orbits which do not
require readjustment of programmed instructions during course of flight,
electronic logic circuits are satisfactory because of their simple
design, low weight and small size. The algorithm of analysis for each

Card 1/3

L 23704-66

ACC NR: AT6003856

Sensors

Pulse rate

Respiration rate

Body temperature

Electric resistance of skin

Level of consciousness

Level of motor activity

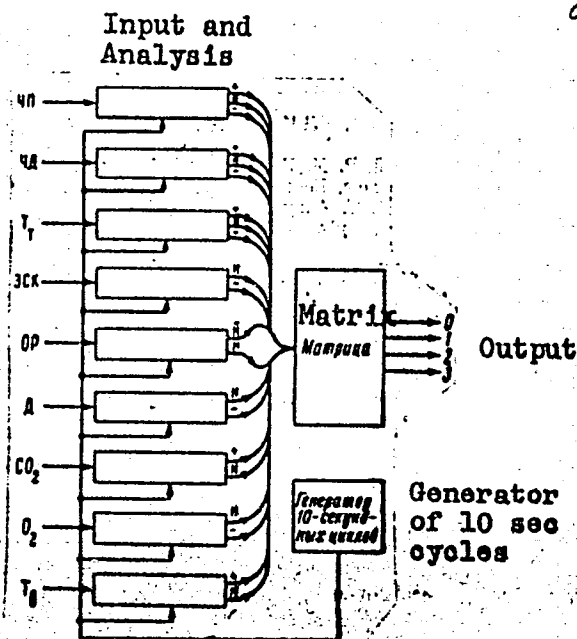Carbon dioxide level

Oxygen level

Temperature

Input and Analysis

Matrix

Output

Generator of 10 sec cycles

Fig. 6. Block diagram of an electronic logical system for automatic medical control.

Card 2/3

L 23704-66

ACC NR: AT6003856

)f the indices (such as, body temperature) includes three operations:
(1) measurement of the index during a given interval of time; (2)
comparison of the index value with the norm range in the form of
symbols, e.g., designating normal by "N", or "+" for higher than normal,
or "-" for lower than normal; and, (3) comparison of symbols of
different parameters according to a given logical system and determina-
tion of a code indicating a "diagnosis." (see Fig. 6). All problems of
automatic diagnosis in which linear programming is applicable can be
solved by electronic logic circuits. Orig. art. has: 6 figures and
1 table.

SUB CODE: 06, 09/ SUBM DATE: none/ ORIG REF: 004.

Card 3/3 FV

KOSTIKOV, Ye.I., assistent.

Investigation of the conical smoke exhaust system in locomotives.
[Trudy] MVTU no.27:129-140 '54.   (MLRA 7:11)
      (Locomotives--Exhaust)

L 10806-66   EWT(m)/T   IJP(c)

ACC NR: AP5027306   SOURCE CODE: UR/0241/65/010/010/0067/0073

AUTHOR: Belle, Yr. S.; Kostikov, Yu. I.; Shamov, V. P.; Shapiro, E. L.

ORG: Lenigrad Scientific Research Institute of Radiation Hygiene, Ministry of Health, RSFSR Leningradskiy Nauchno-issledovatel'skiy institut radiatsionnoy gigieny Ministerstva zdravookhraneniya RSFSR)

TITLE: Radiometic properties of the large liquid scintillation counter BZhSS-1

SOURCE: Meditsinskaya radiologiya, v. 10, no. 10, 1965, 67-73

TOPIC TAGS: scintillation counter, gamma counter, scintillation spectrometer, radiation instrument, radiobiologic instrumentation, experiment animal/BzhSS-1 scintillation counter

ABSTRACT: The article describes the counter and illustrates it in a figure. Its 4π dimension and large measuring volume permits considerable amplification of the criterion of radiometric quality, n^2/n background. It is particularly suitable for measuring low gamma radiation in experimental animals up to a large rabbit and other objects of similar size. A procedure for finding the optimal differential registration channel is given. The instrument has spectrometric semi-

Card 1/2   UDC: 612.014.482:621.387.4

L 10806-66

ACC NR: AP5027306   0

resolution equal to 39 and 21% for Cs^{137} and K^{40} respectively and thus
does not allow analysis of complex gamma radiation spectra. Activities
of 5.10^{-11} to 5.10^{-3} curies can be measured. Isosensitivity of the
larger part of the measuring volume is shown to be high and is seen
particularly upon moving the source. The configuration of the object
hardly influences the measuring results. Increased specimen volume will
lead to self-absorption and attemuation of initial gamma irradiation
producing a slight drop in the count. This is shown on aqueous phan-
toms. For those up to 0.5 liter this does not depend on radiation
energy and amounts only to a few percent. This counter has been used
for radiobiologic and radiation protection studies and has been found
highly reliable. Reproducibility was increased 10-20 times compared
to radiochemical methods, and the number of measured objects reached
6000 per year. Its use for prevital radioactivity determination in
experimental animals afforded studies of isotope metabolism in the
organism. Orig. art. has: 10 figures.

SUB CODE: 06, 07/ SUBM DATE: 05Jan 65/ ORIG REF: 001/ OTH REF: 002

Card 2/2

IVANOV, B.I.; ISTOMINA, V.N.; LYUDKOVSKAYA, A.A.; KOSTIKOVA, A.Ya.;
    TALYZENKOVA, G.P.

    Preparation of thixotropic paint materials and study of their
    physicomechanical properties. Lakokras.mat.i ikh prim. no.1:
    28-33 '62.   (MIRA 15:4)
                        (Paint materials)

IVANOV, B.I.; ISTOMINA, V.N.; LYUDKOVSKAYA, A.A.; KOSTIKOVA, A.Ya.;
TALYZENKOVA, G.P.

Methods of preparing thixotropic lacquer and paint materials.
Lakokras. mat. i ikh. prim. no.4:21-27 '61.   (MIRA 16:7)

(Paint materials)   (Thixotropic substances)

ANDREYEVA, O.I.; KOSTIKOVA, G.I.

    Isotopic exchange of C^{14} in the systems $KCN - CO_2$, $KCN - CO$.
    Trudy GIPKH no.49:149-158 '62.   (MIRA 17:11)

L 52517-65   ENT(1)/ENT(m)/ENP(i)/T/ENP(t)/EEC(b)-2/ENP(b)/EWA(c)   Pi-4   IJP(c)
ACCESSION NR: AP5010729   JD/GG   UR/0181/65/007/004/1169/1174

AUTHOR: Rozhanskiy, V. N.; Kostikova, K. P.

TITLE: Morphology and origin of stacking faults in epitaxial layers

SOURCE: Fizika tverdogo tela, T. 7, no. 4, 1965, 1169-1174

TOPIC TAGS: epitaxial layer, stacking fault, crystal growth, dislocation motion

ABSTRACT: The authors investigated the configuration of stacking faults in epi-
taxial layers of germanium at the place of their origination on the boundary be-
tween the substrate and the epitaxial layer. The faults were observed in an elec-
tron microscope in transmitted light, at an accelerating voltage 100 kV. The sam-
ple preparation procedure is briefly described. The examination in the electron
microscope has shown that the epitaxial layer is neither homogeneous nor of con-
stant thickness but consists of individual coalesced drops. Single drops take
frequently triangular, rectangular, or quadratic forms, the outlines of which dis-
appear upon coalescence. Several types of classifications are found among the con-
figurations of the stacking faults and are described. The formation of stacking
faults is attributed to oxidation or to capture of impurities, and also splitting

Card 1/2

L 52517-65   *1*

ACCESSION NR: AP5010729

of substrate dislocations. "The authors thank N. N. Sheftal', Ye. I. Givargizov, and V. L. Indenbom for useful discussion, and A. F. Stepanova, V. I. Muratova, and Yu. Kostyuk for help with the experiment." Orig. art. has: 6 figures.

ASSOCIATION: Institut kristallografii AN SSSR (Institute of Crystallography, AN SSSR)

SUBMITTED: 09Nov64   ENCL: 00   SUB CODE: 88

NR REF SOV: 002   OTHER: 010

Card 2/2

KRIVCHENKOVA, Lyusya; TYURINA, Lara; KOSTIKOVA, Lida; KOSAREVA, Lida;
    RUMYANTSEV, Andryusha; CHIZHIKOVA, Lida; GOLEN'SHIN, Petya

Blooming gladioli in May. IUn. nat. no.5:11 My '58.   (MIRA 11:5)

1.Shkola No.538, Moskva.
                              (Gladiolus)

KOSTIKOVA, R.I.

Diagnosis of zinc phosphide poisoning in livestock and poultry.
Veterinariia 36 no.5:73 My '59.   (MIRA 12:7)

1. Saratovskaya nauchno-issledovatel'skaya veterinarnaya stantsiya.
             (Zinc phosphide--Toxicology)

STEPINA, S.B.; SEDEL'NIKOV, G.S.; KOSTIKOVA, R.V.

Solubility of strontium and calcium nitrates at 0°C. Zhur.neorg.
khim. 7 no.3:633-640 Mr '62.   (MIRA 15:3)
(Strontium nitrate) (Calcium nitrate) (Solubility)

GURVICH, Ya.A.; KOSTIKOVA, V.P.

Use of ultraviolet spectroscopy in the analysis of new kinds of captax put on the market. Zhur.VKHO 7 no.2:231-232 '62.

(MIRA 15:4)

1. Dorogomilovskiy khimicheskiy zavod.
(Benzothiazole--Spectra)

GURVICH, Ya. A.; ARISTOVA, T. V.; KOSTIKOVA, V. P.

Spectrophotometric determination of 2,2'-dibenzothiazole
disulfide. Zhur. VKHO 7 no.5:580 '62.   (MIRA 15:10)

1. Dorogomilovskiy khimicheskiy zavod imeni Frunze.

(Benzothiazole—Spectra)

KOSTIKOVA, V.V.

Characteristics of disorders in the intellectual activity of
schizophrenia patients with psychopathylike manifestations in
the picture of the disease and the defect. Vop.klin., patog. i
lech. shiz. no.1:75-77 '64.   (MIRA 18:5)

1. Laboratoriya eksperimental'noy patopsikhologii (zav. - doktor
pedagogicheskikh nauk B.V.Zeygarnik) Moskovskoy gorodskoy
psikhiatricheskoy bol'nitsy No.4 imeni Gannushkina (glavnyy
vrach - V.N.Rybalka).

KOSTIKYAN, G.K., dots.; POPOV, V.I., kand. sel'skokhozyaystvennykh nauk;
    KAZARYAN, V.A., assistent.

    Subalpine pastures. Nauka i pered. op. v sel'khoz. 7 no.10:45-46
    0 '57.   (MIRA 10:11)

    1. Yerevanskiy zooveterinarnyy institut.
                    (Armenia—Pastures and meadows)

KOSTILEVA, i.N., inzh.

Correct use of cotton-knitting machines. Tekstilna prom 11 no.2:15-17
'62.

KOSTIN, A.

K.E. TSiolkovskii, amateur photographer. Sov.foto 18 no.12:77
D '58.
(MIRA 11:12)
(TSiolkovskii, Konstantin Eduardovich, 1857-1935)

KOSTIN, A. inzhener.

All-purpose gauge board with plumb line. Avt.dor.20 no.1:31 Ja '57.
(MLRA 10:3)
(Measuring instruments)

KOSTIN, A., inzhener.

Take the requiremnets of users into consideration in designing automobiles. Avt.transp. 35 no.1:29 Ja '57.   (MLRA 10:3)
                    (Automobiles--Apparatus and supplies)

KOSTERIN, V.; KOSTIN, A.

Improve loading and unloading operations. Rech. transp. 22
no.5:21-23 My '63.   (MIRA 16:8)

1. Zamestitel' nachal'nika Volzhskogo on"yedinennogo parokhodstva
(for Kosterin).
          (Cargo handling—Equipment and supplies)

KOSTIN, A.

In a Kaluga astronaut's house. Av.i kosm. 45 no.4:19-21 Ap
'63.   (MIRA 16:3)

1. Zamestitel' direktora muzeya K.E.TSiolkovskogo, g. Kaluga.
          (TSiolkovskogo, Konstantin Eduardovich, 1857-1935)

KOSTIN, A., kand. istoricheskikh nauk

At the sources of the Leninist party. Komm. Vooruzh. Sil 9 no.21:86-92 N '64.

(MIRA 17:12)

KONDRAT'YEV, I.; ABRAMOV, I.; AKSENOV, I.; KOSTIN, A., inzh.; STADNICHUK, P., mekhanik; DAVYDENKOV, N.; PALEYEV, G.

Supply of spare parts. Avt.transp. 43 no.3:26-29 Mr '65.

(MIRA 18:5)

1. Glavnyy inzh. Novokakhovskoy avtobazy (for Abramov).
2. Starokonstantinovskiy avtopark (for Stadnichuk).

MEYEROVICH, E.A.; KOSTIN, A.A.; KOKURKIN, B.P.; VLADIMIROV, S.P.

Studying the influence of ferromagnetic elements in the
construction of powerful aluminum electrolytic cells on
magnetic fields in the zone of melting. TSvet met. 38 no.11:
84-90 N '65.   (MIRA 18:11)

LOZOVOY, D.A., kand. tekhn. nauk; KOSTIN, A.A., inzh.; OSTROVSKIY, A.;
TSYGANOV, R.; CHVANOV, V.

Reviews and bibliography. Avt. dor. 28 no.4:30-42 Ap '65.
(MIRA 18:5)

MEYEROVICH, E.A. (Moskva); KOSTIN, A.A. (Moskva); NIKITINA, Yu.Ye. (Moskva);
KOKURKIN, B.P. (Moskva); VLADIMIROV, S.P. (Moskva)

Study of current supply systems of modern aluminum electrolyzers.
Izv. AN SSSR. Energ. i transp. no.1:89-93 Ja-F '64. (MIRA 17:4)

KOSTIN, A.A., inzh.

Location of roads in the region of great Tyumen' oil fields.
Avt.dor. 28 no.10:8-9 O '65.

(MIRA 18:11)

KOSTIN, Al'bert Andreyevich, mladshiy nauchnyy sotrudnik

Electromagnetic transverse forces in a system of solenoids with
parallel axis. Izv.vys.ucheb.zav.; elektromekh. 5 no.10:1091-
1096 '62.   (MIRA 15:11)

1. Gruppa teoreticheskoy elektrotekhniki energeticheskogo instituta
imeni G.M.Krzhizhanovskogo.
                    (Electromagnets)

ACCESSION NR: AP5006818   S/0144/65/000/001/0113/0114

AUTHOR: Kostin, A. A. (Junior research associate of theoretical electrical engineering laboratory)

TITLE: Magnetic flux density on the axis of a conical coil

SOURCE: IVUZ. Elektromekhanika, no. 1, 1965, 113-114

TOPIC TAGS: magnetic flux density, conical coil

ABSTRACT: The flux density at a point x_0 lying on the axis of a conical coil passing a current i is determined by integrating a formula for the flux density of elementary coils of a length dS. The flux density of a conical coil is given by:

$$B(0, x_0) = \frac{\mu i w}{2S}\left\{\cos(\alpha - \beta_1) - \cos(\alpha - \beta_2) - \sin^2\alpha \ln \frac{\left(\operatorname{tg}\frac{\beta_2}{2} - \operatorname{ctg}\frac{\alpha}{2}\right)}{\left(\operatorname{tg}\frac{\beta_2}{2} + \operatorname{tg}\frac{\alpha}{2}\right)} \frac{\left(\operatorname{tg}\frac{\beta_1}{2} + \operatorname{tg}\frac{\alpha}{2}\right)}{\left(\operatorname{tg}\frac{\beta_1}{2} - \operatorname{ctg}\frac{\alpha}{2}\right)}\right\}.$$

Card 1/2

ACCESSION NR: AP5006818

where μ is the magnetic permeability, w is the number of turns, α is the cone angle, and β is an angle connected with the position of the point x_0. Orig. art. has: 1 figure and 16 formulas.

ASSOCIATION: Energeticheskiy institut im. V. M. Krzhizhanovskogo (Power-Engineering Institute)

SUBMITTED: 05Feb64   ENCL: 00   SUB CODE: EE

O REF SOV: 000   OTHER: 000

Card 2/2

PHASE I BOOK EXPLOITATION   SOV/1700

N(7)

Livov. Universitet

Materialy I Vsesoyuznogo soveshchaniya po spektroskopii, 1956.
   t. 2) Moleular spektroskopiya (Materials of the 10th All-Union
Conference on Spectroscopy, 1956. Vol 2: Atomic Spectroscopy)
[Lvov] Izd-vo L'vovskogo univ., 1958. 568 p. (Series: Its:
Fizicheskiy sbornik, vyp.4(9)) 3,000 copies printed.

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po
spektroskopii.

Editorial Board: G.S. Landsberg, Academician, (Resp. Ed.);
S.L. Mandel'shtam, Doctor of Physical and Mathematical Sciences;
I.L. Fabelinskiy, Doctor of Physical and Mathematical Sciences;
V.L. Fabrikant, Doctor of Physical and Mathematical Sciences;
Candidate of Physical and Technical Sciences; S.M. Rayskiy,
Candidate of Physical and Technical Sciences; L.K. Klimovskaya,
(Resumed), Doctor of Physical and Mathematical Sciences; V.S. Militsynchuk
Zimokhov; Doctor of Physical and Mathematical Sciences; A.Ye.
M.: S.L. Ataev; Tech. Ed.: T.V. Saranyuk.

PURPOSE: This book is intended for scientists and researchers in
the field of spectroscopy, as well as for technical personnel
using spectrum analysis in various industries.

COVERAGE: This volume contains 177 scientific and technical studies
of atomic spectroscopy presented at the 10th All-Union Confer-
ence on Spectroscopy in 1956. The studies were carried out by
members of scientific and technical institutes and include
extensive bibliographies of Soviet and other sources. The
studies cover many phases of spectroscopy; spectra of rare earths,
electromagnetic radiation, physicochemical methods for controlling
uranium production, physics and technology of gas discharge,
optics and spectroscopy; abnormal dispersion in metal vapors,
spectroscopy and the combustion theory, spectrum analysis of ores
and minerals, photographic methods for quantitative spectrum
analysis of metals and alloys, spectral determination of the
hydrogen content of metals by means of isotopes, tables, and
atlases of spectral lines, spark spectrographic analysis,
statistical study of variation in the parameters of calibration
curves, determination of traces of metals, spectrum analysis in
metallurgy, thermochemistry in metallurgy, and principles and
practice of spectrochemical analysis.

Card 2/31

Materials of the 10th All-Union Conference (Cont.)   SOV/1700

Belkov, L.S., and A. Fomin. Studying the Photometric   195
   Characteristics of Photon Counters

Maltsev, A.A., V.A. Koryazhin, N.Ye. Mizguevich, and V.N.
   Intenstoy. Certain Changes in the Design of the DFS-4
   Spectrometer Recording System for the Purpose of Resolving
   the Isotope Shift in the Lithium Resonance Line   195

Vereis, A.N. Flame Spectrophotometer   197

Pchelenskiy, I.V., and M.S. Oguriteova. Radiation From   199
   The Explosion of a Wire Under Water

Lomonoeve, L.S., A.T. Bedogaaov, and A.Ye. Novik. Effect   201
   of Molecular Gas Admixture on Low-pressure Mercury
   Discharge Radiation

Pchelenskiy, I.V., and L.D. Kondrasheva. Concave Mirror   204
   Installation for Studying Absorption in Light Sources

Card 11/31

05439
SOV/120-59-3-10/46

AUTHORS: Shelkov, L. S., Prager, I. A. and Kostin, A. G.

TITLE: Photon Counters for Accurate Measurements of Ultraviolet
Radiation (Schetchiki fotonov dlya tochnykh izmereniy
ul'trafioletovogo izlucheniya)

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 3,
pp 50-56 (USSR)

ABSTRACT: Photon counters have long been used in the detection of
weak ultraviolet radiation (Refs 1-11). They have also
been used in spectral analysis (Refs 12 and 13). In all
this work photon counters were used either in qualitative
or semi-qualitative studies or in measurements which do
not require high accuracy. However, in spectral analysis
the required accuracy should be at least 1-2% and the
exposure time is usually limited to 30-60 sec. In such
measurements photon counters have to be used with
relatively large loads. Under such conditions, the
counters are not sufficiently stable (Ref 14). However,
these counters have very high absolute sensitivity, they
are simple in construction and relatively cheap. The
authors have, therefore, carried out some additional
studies of photon counters under various working conditions
Card 1/4 including high loads. Electrical and photometric

05439
SOV/120-59-3-10/46

Photon Counters for Accurate Measurements of Ultraviolet Radiation

characteristics have been obtained for self-quenching photon counters with photo-cathodes of various materials. Relatively large counting rates were used to ensure low statistical errors. A photon counter has been developed which has a Cu-Be photo-cathode and a tungsten grid screen. Such a construction considerably improves the constancy of the photo-cathode sensitivity. Experiments showed that Cu-Mg and Cu-Be photo-cathodes have very noticeable advantages. Fig 11 shows the construction of a photon counter developed by the authors which has a low dark current and low probability of formation of spurious pulses. In Fig 11, 1 is the stainless steel cathode cylinder, 2 is a tungsten screen grid. 3 is a Cu-Be photo-cathode, 4 are quartz to glass seals, 5 is a fused quartz window, 6 are kovar discs, 7 is a quartz tube and 8 is the anode wire. The area of the photo-cathode was made as small as possible. The quartz window has an 80% transmission for $\lambda = 1900\ \overset{o}{A}$. Fig 8 shows the variation in the sensitivity of a photon counter with a Cu-Be photo-cathode (curve 1) and a counter with an identical photo-cathode

Card 2/4

05439
SOV/120-59-3-10/46

Photon Counters for Accurate Measurements of Ultraviolet Radiation

but with an additional screen grid (curve 2). The
measurements were carried out consecutively with a light
source of constant intensity. The counting rate is
plotted along the vertical axis and the number of the
observation along the horizontal axis. Fig 9 shows the
sensitivity of the above two counters as a function of
the total number of counts. The counting rate is plotted
on the vertical axis and the total number of recorded
pulses on the horizontal axis. Fig 10 shows the absolute
spectral characteristics of Cu-Be photo-cathode counters
at the beginning of their work (curve 1 refers to a
counter without the grid and curve 3 with the screen grid)
and after 10^6 recorded counts (curve 2 refers to the
counter without the grid and curve 4 to the counter
with the screen grid). All this work has shown that
counters using the screen grid have more stable photo-
metric characteristics. The main working parameters of
an experimental set of counters with Cu-Be photo-cathodes
and screen grids are given in Table 1. The maximum
background is 35 pulses/min, the length of the plateau is
Card 3/4   150-250 V and the plateau slope is between 0.06%-0.2% per V.

05439
SOV/120-59-3-10/46

Photon Counters for Accurate Measurements of Ultraviolet Radiation

The working voltage is between 1100 and 1200 V and the maximum counting rate is 40 000 pulses/min. All these results show that these counters may be used as highly sensitive detectors of ultraviolet radiation in the range 1900-3000 Å. The mechanism of the effect of the screen grid will be investigated later.
There are 11 figures, 2 tables and 18 references, 9 of which are Soviet, 2 French, 1 German and 6 English.

ASSOCIATIONS: Fizicheskiy institut AN SSSR (Physical Institute of the Ac.Sc., USSR) and Moskovskiy elektrolampovyy zavod (Moscow Electronic Tube Plant)

SUBMITTED: April 19, 1958

Card 4/4

KOSTIN, A.G., kand. med. nauk (Voronezh, [obl.] ul. Dzen'kovskogo d.23 kv.1)

Some problems of the methodology of surgical setting of congenital dislocations of the hip joint in children. Ortop., travm. i protez. 26 no.9:16-20 S '65.   (MIRA 18:10)

1. Iz kafedry gospital'noy khirurgii (zav. - prof. V.P. Radushkevich) Voronezhskogo meditsinskogo instituta.

SHELKOV, L.S.; PRAGER, I.A.; KOSTIN, A.G.

To the editor of "Pribory i tekhnika eksperimenta" concerning
E.N.Pavlova's letter. Prib, i tekh. eksp. 6 no.2:198 Mr-Ap
'61.   (MIRA 14:9)
                    (Photons--Measurement)

KOSTIN, A.G., kand.med.nauk

Method for using curarelike substance in surgery on the extremities.
Ortop.travm.i protez. 22 no.4:46-49 Ap '61.   (MIRA 14:11)

1. Iz kafedry gospital'noy khirurgii (zav. - prof.V.P. Radushke-
vich) Voronezhskogo meditsinskogo instituta.
    (CURARELIKE SUBSTANCES) (EXTREMITIES (ANATOMY)—SURGERY)

KOSTIN, Aleksandr Ignatlyevich; RAZINKOV, P., red.; KUZNETSOVA, A.,
        tekhn. red.

[Take care of apartment houses] Berech' zhiloi fond. Mo-
skva, Mosk. rabochii, 1963. 65 p.   (MIRA 16:9)

1. Nachal'nik zhilishchno-ekspluatatsionnoy kontory No.5
Moskvy (for Kostin).
                        (Apartment houses)

KOSTIN, A.I., inzhener.

Calculation concerning a river bed of parabolic cross section. Gidr.stroi.
22 no.5:37-38 My '53.   (MLRA 6:6)
                                                        (Hydrodynamics)

124-57-1-529

AUTHOR: Kostin, A. I.

TITLE: On a Partial-head Regimen in Conduit Systems (O polunapornom rezhime v trubchatykh sooruzheniyakh)

ABSTRACT: The author distinguishes three regions of a partial-head regimen in the flow through a conduit system: (1) a region exposed to a pressure head, but not to a vacuum, 2) a region comprising stable head and vacuum conditions, and 3) a region comprising fluctuations (instability) between the two. The peculiarities of the motion of the flow in the three regions are described, and criteria are adduced for the transition from one region to another.

V. V. Fandeyev

1. Hydraulic conduits--Flow--Analysis

Card 1/1

Kostin, A.I.

124-1957-2-1898

Translation from: Referativnyy zhurnal, Mekhanika, 1957. Nr 2, p 61 (USSR)

AUTHORS: Skiba. M.M., Kostin, A.I.

TITLE: To the Determination of the Critical Depth in a Trapezoidal Channel (K voprosu opredeleniya kriticheskoy glubiny v trapetsoidal'nom rusle)

PERIODICAL: Sb.tr.Novocherkas. inzh.-melior. in-ta, 1955, Nr 5, pp 116-124

ABSTRACT: To determine the critical depth of a trapezoidal channel, h_k, by means of the formula

$$h_k = \mathscr{C}_k \, y_{kp}, \qquad y_{kp} = \frac{m}{b} \sqrt[3]{\frac{\alpha \, Q^2}{g \, b^2}} \qquad (1)$$

where Q, b, and m are the discharge, channel bottom width, and the lateral-slope coefficient, respectively, and g and α are the acceleration of gravity and the Coriolis parameter, the following relationship is proposed:

$$\mathscr{C}_k = f/(1 + y_{kp}) \qquad (2)$$

Special graphs and approx. formulas facilitate the computation.

Card 1/1

P.G.Kiselev

1. Inland waterways--Design   2. Mathematics--Applications

$Kostin, A.I.$

99-7-4/14

SUBJECT: USSR/Irrigation

AUTHOR: Kostin, A.I., Candidate of Mechanical Sciences and Sevast'yanov,
              T.N., Engineer.

TITLE: "Improvement of the Discharge Section of Tubular Structures".
              (Usovershenstvovaniye vykhodnoy chasti trubchatogo sooruzheniya)

PERIODICAL: "Gidrotekhnika i Melioratsiya", 1957, # 7, pp 20-23, (USSR)

ABSTRACT: Tubular structures are largely used at water discharge points
              of irrigation systems. So far, none of the different discharge
              nozzles which have been developed in the past have proved sa-
              tisfactory. The newly developed damper KS-1 (KC-1) meets the
              requirements. It consists of 4 square cross sectional beams,
              which form a girder partition. The lowest beam is installed
              on the bottom, the distances of the individual beams being 1/10
              of the pipe's diameter. Since the upper section of the tube
              is not obstructed by a beam, danger of plugging is greatly re-
              duced. In the event of clogging by objects carried by the
              water, cleaning can easily be accomplished by 2 workers. Re-
              duced velocity of the water current permits considerable savings
              at the construction of the lower pools. Another advantage of

Card 1/2

KOSTIN, A.I.

Conjugate depths in a parabolic channel. Trudy NPI 106:111-112
'60.   (MIRA 15:5)

(Hydraulic jump)

KOSTIN, A.I., inzh.

Analytical methods of determining the depth of a compressed
flow under conditions of a plane problem and the critical depth
in a trapezoidal channel. Gidr. stroi. 33 no.11:41-43 N '62.
(MIRA 16:1)

(Hydrodynamics)

KOSTIN, A.I., inzh.

At the Exhibition of the Achievements of the National
Economy. Vest.mashinostr. 45 no.8:78-79 Ag '65.

(MIRA 18:12)

KOSTIN, A.I., inzh.

Technology of machining parts for precision machine tools in
Switzerland. Vest.mashinostr. 45 no.11:47-50   N '65.
(MIRA 18:12)

D'yachenko, N. Kh.; Kostin, A. K.; Mel'nikov, G. V.; Petrov, V. M.; Kharitonov, B. A.

Theory of internal combustion engines (Teoriya dvigateley vnutrennogo sgoraniya) 58
Moscow, Izd-vo "Mashinostroyeniye," 1965. 459 p. illus., biblio. Textbook for
students specializing in internal combustion engines at institutions of higher 0+/
learning. Errata slip inserted. 16,000 copies printed.

TOPIC TAGS: internal combustion engine, carburization, engine combustion system,
engine performance characteristic, engine exhaust system

PURPOSE AND COVERAGE: This book is published as a textbook for students in higher
technical educational institutions and can also be used as a handbook for engine-
design engineers and their technical staffs. It gives an analysis of the internal
combustion engine and its applications, from agricultural equipment (stationary
and mobile) through automotive and marine uses. A thorough description of turbo-
superchargers and engine power rating is included. Fuel and cooling systems and
their characteristics are also discussed. This book was prepared by the internal-
combustion-engines faculty of the Leningrad Politechnical Institute im. M. I.
Kalinin. The authors appear in the following order: B. A. Kharintovich, chapters I
and IX; G. V. Mel'nikov, chapters II and VII (Except subheading 4 and 5 in chapter
VII); N. Kh. D'yachenko, chapters III and VI (Except subheading 4 in chapter VI):
V. M. Petrov, chapters IV and V (Except subheading 1 and 4 in chapter V):
A. K. Kostin, chapters VIII, X, and subheading 4 in chapter VII; B. P. Pugachev,
subheading 1 and 4 in chapter VI: Yu. N. Isakov, subheading 5 in chapter VII.

Card 1/3   UDC: 621.43.001(075.8)

L 27318-66

ACC NR: AM6001048 O

TABLE OF CONTENTS [abridged]:

Card   2/3

L 27316-66

ACC NR: AM6001048

X. Automatic control of internal combustion engines -- 406

Appendix -- 455

References -- 456

SUB CODE: 21/ SUBM DATE: 16Jul65/ ORIG REF: 026/

Card   3/3

KOSTIN, A.K., kand. tekhn. nauk, dotsent; LIVENTSEV, F.L., kand. tekhn. nauk,
    dotsent; MEL'NIKOV, G.V., kand. tekhn. nauk, dotsent

Heat stress of the 10GK-1 gas motor compressor with evaporation cooling.
Energomashinostroenie 11 no.6:20-22 Je '65.   (MIRA 18:7)

BURIN, M.M.; KOSTIN, A.K.

Using the method of thermoelectric analogy in investigating the
steady temperature state of an engine piston. Trudy LPI no.237:5-
10 '64.   (MIRA 18:4)

KOSTIN, A.K.

Determination of limiting characteristics. Trudy LPI no.237:17-20
'64. (MIRA 18:4)

KOSTIN, A.K.

Heat transfer to the cooling medium of an internal combustion
engine. Trudy LPI no.228:102-108 '63.   (MIRA 17:1)

MEL'NIKOV, G.V.; LIVENTSEV, F.L.; PETROV, V.M.; KOSTIN, A.K.

    High-temperature cooling of the 10GK-1 gas motor compressor.
    Trudy LPI no.221:153-165 '62.   (MIRA 15:9)
        (Compressors—Cooling) (Gas, Natural—Transportation)

KOSTIN, A.K.

A parameter for comparative evaluation of thermal stresses in
diesel engines. Trudy LPI no.221:166-179 '62.   (MIRA 15:9)
(Diesel engines)

L 26489-65

ACCESSION NR: AT5003224   S/2563/64/000/237/0005/0010   /0
                                                                      3
AUTHOR: Burin, M. M.; Kostin, A. K.   3 + 1

TITLE: Using the electrothermal analogy method to investigate the steady state
temperature conditions of a motor piston

SOURCE: Leningrad. Politekhnicheskiy institut. Trudy, no. 237, 1964. Teplovyye
mashiny; dvigateli vnutrennego sgoraniya i transportnyye mashiny (Heat engines;
internal combustion engi.es and transport machines), 5-10

TOPIC TAGS: piston temperature, physical modeling, heat exchange, electric
analogy, hydraulic analogy, grid integrator, internal combustion engine

ABSTRACT: One method proposed for investigating the steady-state tempera-
ture conditions of a moving engine part, such as a piston, has been the analogy
method which makes it possible to measure such temperatures with a high degree of
accuracy. This method, in turn, is divided into the electric and hydraulic
methods, the first of which is more effective. The modeling of the temperature
fields is based on the principle of electrothermal analogy and involves the use
of 1) the continuous medium method and 2) the electric grid method. In the first
case, the model represents a continuous electroconductive medium (electrolyte,
Card 1/2

L 26489-65
ACCESSION NR: AT5003224   /

electroconductive paper, tinfoil, dispersed mass, etc.), and in the second the
model appears in the form of an electric grid produced by replacing the modeled
field with the elements of an electric circuit. The electric modeling method
is now used fairly often for the purpose of studying the major parts of internal
combustion motors, such as pistons, bushings and valves. Electroconductive paper
is used in most cases and, less often, an ohmic resistance grid. Orig. art.
has: 4 figures.

ASSOCIATION: Leningradksiy politekhnicheskiy institut imeni M. I. Kalinina
(Leningrad polytechnical institute)

SUBMITTED: 00   ENCL: 00   SUB CODE: PR, TD

NO REF SOV: 010   OTHER: 000

Card 2/2

L 26597-65
ACCESSION NR: AT5003226   S/2563/64/000/237/0017/0020

AUTHOR: Kostin, A. K.

TITLE: Determining the limiting characteristics

SOURCE: Leningrad. Politekhnicheskiy institut. Trudy, no. 237, 1964. Teplovyye
mashiny; dvigateli vnutrennego sgoraniya i transportnyye mashiny (Heat engines;
internal combustion engines and transport machines), 17-20

TOPIC TAGS: calorific intensity, gas turbine, pressure charging, limiting
characteristic, barometric pressure, motor power, fuel feed, turbosupercharger,
marine engine, diesel locomotive engine

ABSTRACT: An increase in calorific intensity accompanying a change to a slower
rate of operation is most likely in the case of motors with turbosuperchargers.
If the reduced number of revolutions increases the fuel feed per cycle (which is
characteristic of certain types of fuel devices), the resulting calorific in-
tensity is still greater. As the rated engine operation usually corresponds to
the optimum temperature of its parts, any increase in the calorific intensity
above that level is usually considered inadmissible. So-called limiting
characteristics are therefore determined in the case of marine and diesel-
Card 1/2

L 26597-65
ACCESSION NR: AT5003226

locomotive engines, because the manufacturer's rating is not always reliable.
Under operational conditions, any disruption of the motor work or a breakdown of
the air cooler or turbosupercharger will reduce the air pressure and temperature
around the various motor inlets. This should be followed by a reduction of the
fuel supply per cycle, i.e. a reduction in the power developed by the motor.
Orig. art. has: 4 formulas and 2 figures.

ASSOCIATION: Leningradskiy politekhnicheskiy institut imeni M. I. Kalinina
(Leningrad polytechnical institute)

SUBMITTED: 00   ENCL: 00   SUB CODE: PR

NO REF SOV: 002   OTHER: 000

Card 2/2

BURIN, M.M.; KOSTIN, A.K.

    Effect of scavenging air on the temperature of engine parts.
    Trudy LPI no.249:29-34 '65.   (MIRA 18:9)

KOSTIN, A.M., inzhener.

Rapid loading of automobiles in the Gorkiy harbor. Rech.transp. 15
no.12:26-27 D '56.   (MLRA 10:2)
    (Gorkiy--Cargo handling)   (Automobiles--Transportation)

PAKHOMOV, V.B., kand. tekhn. nauk; NAUMOV, A.I., inzh.; SHELMANOV ,
V.S., inzh.; KONSTANTINOV, V.P., inzh.; KOSTIN, A.M.,
inzh.; SEMENOV, YU.K., inzh.; PYATLIN, A.A., kapitan;
VAGANOV, G.I., kand. tekhn. nauk; SVIRIDOV, A.A., inzh.
KHODUNOV, M.Ye., kand. yurid. nauk; SAPOGOVA, A.Ye., inzh.;
SOYUZOV, A.A., doktor tekhn. nauk, prof., red.; VASIL'YEV,
A.V., kand. tekhn. nauk; ALEKSEYEV, V.I., red.; KUSTOV, L.I.,
red.; VITSINSKIY, V.V., red.; BORISOV, I.G., red.; SOLAREV,
N.F., red.; ANDRIYENKO, V.I., red.; SUTYRIN, M.A., red.;
GOLOVNIKOV, V.I., red.; ZOTOVA, V.V., red.

[Manual for the navigator of a river fleet] Spravochnik su-
dovoditelia rechnogo flota. Izd.2., dop. Moskva, Transport,
1965. 423 p.   (MIRA 18:2)

1. Gor'kovskiy institut inzhenerov vodnogo transporta (for
Pakhomov, Semenov, Vaganov, Vasil'yev). 2. Moskovskiy rech-
noy tekhnikum (for Naumov). 3. Volzhskoye ob"yedinennoye
rechnoye parokhodstvo (for Shelmanov, Sapogova). 4. Minister-
stvo rechnogo flota (for Konstantinov, Sviridov).5.Kazanskiy port
(for Kostin). 6. Moskovskoye rechnoye parokhodstvo (for Pyatlin).

KOSTIN, A.P.; SKACHKOV, B.S.; IBRAV, V.N.

Improve the quality of manufacturing water rheostats. Elek. i
tepl.tiaga 3 no.2:44 F '59.   (MIRA 12:4)

1. Depo Len'ki, Tomskaya doroga.
                          (Electric rheostats)

KOSTIN, A.P.

     Ecologic foundatiohs of the increase in the productivity of farm
animals. Zool. zhur. 41 no.12:1761-1770 D '62.   (MIRA 16:3)

1. Kafedra fiziologii zhivotnykh Kubanskogo sel'skokhozyaystvennogo
instituta, Krasnodar.
          (Domestic animals) (Zoology—Ecology)

Kostin, A. P.

USSR/Farm Animals. Cattle   Q-2

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 35630

Author   : Kostin A. P.
Inst   : Not Given
Title   : Physiological Processes in Young Cattle under Different
            Ecological Conditions

Orig Pub : Tr. Kubansk. s.-kh. in-te, 1957, vyp. 3 (31), 45-67

Abstract : Experiments were carried out on 4 groups of cattle (mostly
           on castrated young bulls) in the Krasnodar region. The
           first group, composed of 30 animals of the Red Steppe breed,
           9-18 months of age, was reared on the plains. The second
           analogous group of 19 heads was kept at an altitude of 1,000-
           1,800 m. above sea level. The third group, consisting of
           16 heads of the Kuban'-Black Sea breed, raised at an alti-
           tude of 800-1,000 m., stayed for 45 days at an altitude of
           1,800-2,000 m. The respiration, gas metabolism, and state
           of the cardiovascular system of the animals, were studied.
           It was found that on the plains in the summertime, during

Card   : 1/2

USSR/Farm Animals. Cattle   Q-2

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 35630

daylight hours the frequency of respiration was increased;
likewise, cardiac activity and gas metabolism were inten-
sified. The heat production and thermal regulation de-
pended on the temperature of the air, the food consumed, and
the movements of the animal. After the transfer of the cat-
tle from the plains to high mountain pastures, the frequency
of respiration and pulse were increased, as well as the for-
mal elements in the blood. After a 45-day stay at the high
altitude pasture, the level of the oxidation processes of the
lung, and cardiac activity had decreased. The rapidity of
the adaptation of animals to the new ecological conditions
depended on the previous conditions of their management.

Card   : 2/2

Kostin A.P.

                                                         Q-3

USSR/Farm Animals. Cattle

Abs Jour   : Ref Zhur - Biol., No 7, 1958, 30943

Author   : Kostin A.P., Gasteva G.S.
Inst   : ───────────
Title   : Physiological Peculiarities of the Red Steppe and Kuban'-
                 Black Sea Cattle.
                 (Fiziologicheskiye osvennosti u krasnostepnogo i kubano-
                 chernomorskogo skota).

Orig Pub   : Tr. Kubansk. s.-kh. in-ta, 1957, vyp. 3 (31), 68-81.

Abstract   : Physiological processes under different ecological con-
                 ditions were studied on 26 calves, 47 castrated bulls,
                 14 heifers, and 18 cows. The Red Steppe cattle surpass
                 other breeds by their high adaptability to the hot cli-
                 mate of Kuban'. The first intake of food lowers the
                 oxidation processes in the calf, but in the second and
                 subsequent feeding, gas metabolism increases and cardiac
                 activity is intensified. In calves of the Red Steppe

Card 1/2

KOSTIN, A.P., Doc Biol Sci -- (diss) "Physiological studies of the adaptation of cattle to the factors of environment in under conditions OF plains and mountains." Krasnodar, "Soviet Kuban'", 1956, 29 pp (Acad Sci USSR. Inst of Physiology im I.P. Pavlov) 120 copies (KL, 23-58, 103)

- 31 -

KOSTIN, A.P.

Physiology of altitudinal acclimatization in cattle. Opyt izuch.reg.
fiziol.funk. 4:54-65 '58.   (MIRA 12:4)

1. Laboratoriya ekologicheskoy fiziologii (zaveduyushchiy - prof. A.D.
Slonim) Instituta fiziologii imeni I.P. Pavlova AN SSSR i Kafedra fizio-
logii zhivotnykh Kubanskogo sel'skokhozyaystvennogo instituta.
                    (CATTLE--PHYSIOLOGY)
                    (ALTITUDE, INFLUENCE OF)
                    (RESPIRATION)

KOSTIN, A.P.

Effect of digestive processes in rumen on the gas and energy
metabolism of ruminants. Agrobiologiia no.2:171-176 Mr-Ap '59.
(MIRA 12:6)

1. Kubanskiy sel'skokhozyaystvennyy institut, kafedra fiziologii
zhivotnykh.
                    (Ruminantia) (Metabolism)

KOSTIN, A.P.; SUKHOMLIN, K.G.

Reactions of cutaneous blood vessels to heat and cold in cattle.
Fiziol.zhur. 47 no.3:329-335 Mr '61.   (MIRA 14:5)

1. From the Animal Physiology Chair of the Agricultural Institute,
Krasnodar.
            (SKIN—BLOOD SUPPLY)   (TEMPERATURE—PHYSIOLOGICAL EFFECT).

ZEL'TSER, G.Ya.; VOLOBOYEV, I.N.; KOSTIN, A.P.; BULGAKOV, A.A.;
VOZNYUK, V.S.; KALMYKOV, A.M.; STUDENTSOV, S.A.; BERSHIDSKIY,
P.I.; MOISEYEV, G.A., inzh., retsenzent; SOBAKIN, V.V., inzh.,
red.; VOROTNIKOVA, L.F., tekhn. red.

[The TG102 diesel locomotive]Teplovoz TG102. Moskva, Transzheldor-
izdat, 1962. 150 p.   (MIRA 16:1)
        (Diesel locomotives--Hydraulic drive)

STARKOV, P.M., prof., red.; AKOPOV, I.E., prof., red.; KOSTIN, A.P.,
        prof., red.; PYATNITSKIY, N.P., prof., red.; LATYSHEV, V.A.,
        dots., red.; AGANYANTS, Ye.K., kand. med. nauk, red.

        [Materials of the 14th Conference of Physiologists of the
        Southern R.S.F.S.R.] Materialy Konferentsii fiziologov iuga
        RSFSR Krasnodar, Vses. fiziologicheskoe ob-vo im. I.P.
        Pavlova, 1962. 406 p.   (MIRA 17:9)

        1. Konferentsiya fiziologov yuga RSFSR. 14th, Krasnodar, 1962.
        2. Kafedra normal'noy fiziologii Kubanskogo meditsinsko'
        instituta, Krasnodar (for Aganyants). 3. Zaveduyushchiy kafedroy
        farmakologii Kubanskogo meditsinskogo instituta, Krasnodar (for
        Akopov). 4. Zaveduyushchiy kafedroy fiziologii zhivotnykh Kuban-
        skogo sel'skokhozyaystvennogo instituta, Krasnodar (for Kostin).
        5. Zaveduyushchiy kafedroy anatomii i fiziologii Krasnodarskogo
        pedagogicheskogo instituta (for Latyshev). 6. Zaveduyushchiv
        kafedroy biokhimii Kubanskogo meditsinskogo instituta, Krasnodar
        (for Pyatnitskiy). 7. Zaveduyushchiy kafedroy normal'noy fizio-
        logii Kubanskogo meditsinskogo instituta, Krasnodar (for Starkov).

901. USE OF CHOLECYSTOGRAPHY IN CHILDREN (Russian text) - Kostin
      A. S. Dept. of Ped. of the Med. Inst., Kiev. - PEDIAT. AKUS. GINEK.
      1956, 6 (9-12) Illus. 8

Cholecystography was carried out in 54 children, using the Soviet preparation bil-
itrast as contrast medium. This was given per os 14 hr. before the roentgenolo-
gical examination, calculated 0.065 per kg. weight. The gallbladder shadow in
cholecystograms of generally healthy children has the shape of a pear. Complete
emptying of the gallbladder takes place in the course of 1.5 hr. after the ingestion
of egg yolk. In children suffering from cholangiocystitis, a decrease in the intensi-
ty of the gallbladder shadow and various shapes of the shadow (round, cylindrical,
conical, pear-shaped) were observed. The emptying of the gallbladder took place
at various times - from 0.5 to 2.5 hr. - indicating the presence of dyskinesia of
the bile ducts. The author established different types of emptying of the gallbladder
depending on its shape. Cholecystography can be recommended as a useful diag-
nostic procedure in children's hospitals. (Bilitrast = Iod phthaleinum natricum.)

                                                            Motuz - Kiev (S)

KOSTIN, A. S., Cand Med Sci -- (diss) "Materials for the diagnostics
of the biliary tract in children." Kiev, 1960. 20 pp; (Kiev Order of
Labor Red Banner Medical Inst im Academician A. A. Bogomol'ts); 300
copies; price not given; (KL, 25-60, 139)

KOSTIN, A.V. [Kostin, O.V.]

Asymptotic series in the theory of nonlinear systems of ordinary
differential equations. Dop. AN URSR no.4:461-464 '64.

(MIRA 17:5)

1. Odesskiy gosudarstvennyy universitet. Predstavleno akademikom
AN UkrSSR Yu.A.Mi ropol'skim [Mytropol'a'kyi, IU.O.].

KOSTIN, A.V. (Odessa)

Single-valued solutions to nonlinear first-order differential
equations and some properties of real periodic solutions.
Ukr. mat. zhur. 16 no.1:110-115 '64.   (MIRA 17:5)

KOSTIN, A.   (Kostin, O.V.)

Asymptotic formulae for the solution of linear systems of
ordinary differential equations. Dop. AN URSR no.10:1295-
1297 '62.   (MIRA 18:4)

1. Odesskiy gosudarstvennyy universitet.

KOSTIN, A.V., kandidat sel'skokhozyaystvennykh nauk.

    Absorption of light by the leaves of field crops. Izv.
TSKhA no.1:79-94 '56.   (MLRA 9:10)

    (Photosynthesis) (Leaves)

KOSTIN, A.V.

Authors' and readers' conference on shipbuilding literature.
Sudostroenie 24 no.4:75 Ap '58.   (MIRA 11:4)
        (Shipbuilding--Congresses)

S/021/61/000/005/002/012
D215/D304

A. V.

AUTHOR: Kostin, O.V.

TITLE: On the asymptotic properties of partial solutions of
            non linear systems of ordinary differential equations

PERIODICAL: Akademiya nauk Ukrayins'koyi RSR. Dopovidi, no. 5,
            1961, 590 - 594

TEXT: In the first part of the present paper the author gives a
sufficient condition, under which the system of differential equa-
tions

$$\frac{dy_i}{dt} = q_i(t) + \sum_{k=1}^{n} p_{ik}(t)\,y_k + X_i(t, y_1, \ldots, y_n) \quad (i = 1, \ldots, n), \tag{1}$$

has at least one bounded solution. All functions are defined in the
domain $G[t \geqslant T, /y_i/ \leqslant a]$ where T, a are constant, $a > 0$ and the

Card 1/8

On the asymptotic properties ...

functions used have the following properties. All functions are complex functions continuous in the domain G and $X_i(t, 0, ..., 0) \equiv 0$, ($i = 1, ..., n$). Functions $X_i(t, y_1, ..., y_n)$ satisfy the Lipshits conditions in the domain G, i.e.

$$|X_i(t, y_1, ..., y_n) - X_i(t, z_1, ..., z_n)| < L_i(t) \sum_{k=1}^{n} |y_k - z_k| \quad (i = 1, ..., n),$$

where $L_i(t)$ is a continuous function for $t \geqslant T$. System (1) in the domain G differs little from the linear triangular system

$$\frac{dy_i}{dt} = \sum_{k=i}^{n} p_{ik}(t) y_k \quad (i = 1, ..., n). \tag{2}$$

The aim of the paper is to present an improved method of successive approximations. Let $y_{i s-1}$ ($i = 1, ..., n$) be the $(s-1)$-st approximation then y_{is} is defined as follows:

Card 2/8

On the asymptotic properties ...

S/021/61/000/005/002/012
D215/D304

$$\frac{dy_{is}}{dt} = q_i(t) + \sum_{k=1}^{i-1} p_{ik}(t) y_{ks-1} + X_i(t, y_{1s-1}, \ldots, y_{ns-1}) + \sum_{k=i}^{n} p_{ik}(t) y_{ks}$$

$$(i = 1, \ldots, n).$$

The initial values of y_{is} could be chosen in such a way that y_{is} are expressed by the formula:

$$y_{is} = \int_{A_i} q_i \exp \int_\tau^t p_{ii} dt \, d\tau + \sum_{k=1}^{i-1} \int_{A_{ik}} p_{ik} y_{ks-1} \exp \int_\tau^t p_{ii} dt \, d\tau +$$

$$+ \int_{A_{x_i}} X_i(t, y_{1s-1}, \ldots, y_{ns-1}) \exp \int_\tau^t p_{ii} dt \, d\tau + \sum_{k=i+1}^{n} \int_{A_{ik}} p_{ik} y_{ks} \exp \int_\tau^t p_{ii} dt \, d\tau$$

$$(i = 1, \ldots, n).$$

Card 3/8

On the asymptotic properties ...   S/021/61/000/005/002/012
                                          D215/D304

The limits of integration A_i, A_{ik}, A_{xi} were chosen in the follow-
ing way:

$$A = +\infty \text{ if } \int^{+\infty} \Phi e^{-\int_T^t Re p_{ii} dt} $$

exists, and $A = T$ if not. Then the auxiliary functions $\xi_i(t, \epsilon)$
were found from the

$$\xi_i = \lambda_i \int_{A_i}^t |q_i| \exp \int_\tau^t Re p_{ii} dt d\tau + \epsilon \sum_{k=1}^{i-1} \lambda_{ik} \int_{A_{ik}}^t |p_{ik}| \exp \int_\tau^t Re p_{ii} dt d\tau +$$

$$+ n\epsilon \lambda_{x_i} \int_{A_{x_i}}^t L_i(\tau) \exp \int_\tau^t Re p_{ii} dt d\tau + \sum_{k=i+1}^n \lambda_{ik} \int_{A_{ik}}^t |p_{ik}| \xi_k \exp \int_\tau^t Re p_{ii} dt d\tau \tag{3}$$

$$(i = 1, \ldots, n),$$

It is evident that $\xi_i = A_i(t) + \epsilon B_i(t)$ $(i = 1, \ldots, n)$. The cons-
Card 4/8

On the asymptotic properties ...

S/021/61/000/005/002/012
D215/D304

tant $\varepsilon \leqslant a$ could be chosen in such a way that:

$$A_i(t) + \varepsilon^0 B_i(t) \leqslant \varepsilon^0, \ (i = 1, 2, \dots n), \ t \geqslant T,$$

$$(i = 1, 2, \dots n)$$

when for example

$$0 \leqslant \frac{A_i(t)}{1 - B_i(t)} \leqslant a, \ t \geqslant T,$$

$(i = 1, 2, \dots n)$. It follows immediately that if the first approximation $/y_i, (t)/ \leqslant \varepsilon^0, \ (i = 1, 2, \dots n), \ t \geqslant T$, then all other approximations $/y_{is}(t)/ \leqslant \varepsilon^0$. If in addition

$$\underset{(i)}{\text{Max}} \ [\underset{[T, +\infty]}{\sup} B_i(t)] = m \leqslant 1$$

then the series of successive approximations is absolutely and uni-

Card 5/8

On the asymptotic properties ...   S/021/61/000/005/002/012
D215/D304

formly convergent in the interval $(T, +\infty)$. Therefore, the following Theorem (1) was proved. If the limits A_i, A_{ik}, A_{xi} could be chosen in such a way that

$$\underset{(1)}{\text{Max}}\left[\underset{[T, +\infty]}{\sup} B_i(t)\right] = m < 1 \text{ and } \underset{(i)}{\text{Max}}\left[\underset{[T, +\infty]}{\sup} \frac{A_i(t)}{1-B_i(t)}\right] \leq a$$

then the system (1) has at least one bounded partial solution for $t \geq T$. Further let

$$Q_i = \int_{A_i}^{t} /q_i/ \exp \int_{\tau}^{t} \text{Re } p_{ii} dt d\tau, \quad L_i = \int_{A_{x_i}}^{t} L_i(\tau) \exp \int_{\tau}^{t} \text{Re } p_{ii} dt d\tau,$$

$$P_{ik} = \int_{A_{ik}}^{t} /p_{ik}/ \exp \int_{\tau}^{t} \text{Re } p_{ii} dt d\tau.$$

Card 6/8

On the asymptotic properties ...   S/021/61/000/005/002/012
                                       D215/D304

If A_1, A_{ik}, A_{xi} were chosen as previously described then Theorem 2 is correct. Theorem 2. If all conditions of Theorem 1 are fulfilled and additionally $Q_i \rightarrow 0$ for $t \rightarrow + \infty$ then system (1) has at least one partial solution $y_i^*(t)$ ($i = 1, 2, \ldots, n$) which tends to 0 as t tends to infinity. In the second part of the paper, the connection between the solution of the system

$$\frac{dy_i}{dt} = F_i(t, y_1, \ldots y_n) \quad (i = 1, \ldots, n) \quad (4)$$

and the solution of the system

$$F_i(t, u_1, \ldots u_n) = 0 \quad (i = 1, \ldots n) \quad (5)$$

were considered and it was shown how to find approximation or any order. As a particular case the differential equation of the first order was considered

Card 7/8

On the asymptotic properties ...

S/021/61/000/005/002/012
D215/D304

$$\frac{dy}{dt} = f(t, y) [y - v(t)],$$ (6)

where all functions are continuous for $t \geqslant T$. There are 4 referen-
ces: 3 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Odes'kyy derzhavnyy universytet (State University of
Odessa)

PRESENTED: Y.Z. Shtokalo, Member of AS UkrSSR

SUBMITTED: July 15, 1960

Card 8/8

16.3400

S/044/62/000/006/017/127
B158/B112

AUTHOR: Kostin, A. V.

TITLE: Stability and instability of almost triangular systems, asymptotic properties of partial solutions of non-linear systems of differential equations

PERIODICAL: Referativnyy zhurnal. Matematika, no. 6, 1962, 59, abstract 6B251 (Nauchn.yezhegodnik, Odessk. un-t. Fiz.-matem. fak. i N.-i. in-t fiz., Odessa, no. 2, 1961, 82 - 86)

TEXT: A system of equations

$$\frac{dy_i}{dt} = \sum_{k=1}^{n} p_{ik}(t)\, y_k + X_i(t,\, y_1,\, \ldots,\, y_n)$$

$(i=1, \ldots, n)$, is studied, the right-hand terms of which are defined and continuous in the domain $G[t \geqslant T,\ |y_i| \leqslant a,\ T,\ a = \text{const},\ a > 0]$.

Card 1/2

S/044/62/000/006/017/127
B158/B112

It is assumed that this system in certain respects is close to a triangular
system

$$\frac{dy_i^*}{dt} = \sum_{k=i}^{n} p_{ik}(t)\, y_k^*.$$

√B

Certain conditions of stability are given, and also sufficient conditions of
instability of a trivial solution. Proofs of the theorems are not given.
The author reports only on the application of these for proving the method
of O. Perron. Further conditions are given, which are sufficient for the
existence at least of one bounded solution of a system of equations obtained
from (1) by adding certain functions $q_i(t)$ to the right sides of these
equations. [Abstracter's note: Complete translation.]

Card 2/2

KOSTIN, A.V.

Existence of bounded partial solutions and partial solutions
tending toward zero at t -> + oo in a system of ordinary
differential equations. Dif. urav. 1 no.5:585-604 My '65.
(MIRA 18:7)

1. Odesskiy gosudarstvennyy universitet.

GALEYEV, V.; KOSTIN, B.; VAZYKH, G.

Technical information. Okhr. truda i sots. strakh. 6 no.9:39-45
S '63.   (MIRA 16:10)

KOSTIN, B.

Public inspection. Za bezop.dvizh. 4 no.4:1-2 Ap '62. (MIRA 15:5)

1. Predsedatel' Gorodskogo komiteta profsoyuza rabotnikov
svyazi, rabochikh avtotransporta i shosseynykh dorog.
(Automobiles--Inspection)

KOSTIN, B.A.; MANASYAN, B.Sh.

Wave-motion imitating gangways for safely setting men down on
offshore structures. Trudy VNIITB no.11:35-44 '59. (MIRA 15:5)
(Oil well drilling, Submarine)

KOSTIN, B.A.; DUBROVINA, N.D., vedushchiy red.; POLOSINA, A.S.,
tekhn.red.

[Assembling and using safety devices in petroleum and gas
production] Montazh i ekspluatatsiia prisposoblenii po
tekhnike bezopasnosti v neftegazodobyvaiushchei promyshlennosti.
Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry,
1959. 116 p.   (MIRA 12:9)

1. Baku. Vsesoyuznyy nauchno-issledovatel'skiy institut po
tekhnike bezopasnosti v neftyanoy promyshlennosti. 2. Rukovo-
ditel' konstruktorskogo otdela Vsesoyuznogo nauchno-issledovatel'-
skogo instituta po tekhnike bezopasnosti v neftyanoy promyshlen-
nosti.(for Kostin).
    (Petroleum industry--Safety measures)

KOSTIN, B.A.; SHPILEVOY, A.I.

Derrickman's cage for lowering casing columns.   Trudy VNIITB
no.13:55-57 '60.   (MIRA 14:12)
              (Cranes, derricks, etc.)

KOSTIN, B.A.

Improved cage for the derrick man while working with a
mechanized lowering and hoisting unit. Trudy VNIITB no.13:
58-60 '60.   (MIRA 14:12)
               (Cranes, derricks, etc.)